## Message

From: Andrew Baris [abaris@rouxinc.com]

**Sent**: 5/21/2018 2:26:08 PM

**To**: Erin Formanek [Formanekek@cdmsmith.com]

CC: Gunnar Emilsson [EmilssonGR@cdmsmith.com]; Cirian, Mike [Cirian.Mike@epa.gov]; tom.biksey@ehs-support.com;

Laura Jensen [ljensen@rouxinc.com]

Subject: RE: Columbia Falls Aluminum Company Draft Baseline Human Health Risk Assessment Work Plan

## Thanks Erin!

## Andrew Baris, PG (NY)

Principal Hydrogeologist/Executive Vice President

Direct: 631.630.2404 Mobile: 631.921.1805 abaris@rouxinc.com



California | Illinois | Massachusetts | New Jersey | New York | Texas

From: Formanek, Erin [mailto:formanekek@cdmsmith.com]

**Sent:** Monday, May 21, 2018 10:23 AM **To:** Andrew Baris <a href="mailto:abaris@rouxinc.com">abaris@rouxinc.com</a>

Cc: Emilsson, Gunnar < EmilssonGR@cdmsmith.com>; 'cirian.mike@epa.gov' < cirian.mike@epa.gov>; Tom Biksey

<Tom.Biksey@ehs-support.com>; Laura Jensen <ljensen@rouxinc.com>

Subject: RE: Columbia Falls Aluminum Company Draft Baseline Human Health Risk Assessment Work Plan

Drew,

I don't have an EPA-approved revised ratio yet. For this reason, I think for the time being the text as revised below (with yellow addition) would be appropriate. Rather than making an assumption regarding the ratio, it would be best to get site-specific data if possible.

Thank you, Erin

From: Andrew Baris <a href="mailto:abaris@rouxinc.com">abaris@rouxinc.com</a>>
Sent: Monday, May 21, 2018 8:10 AM

To: Formanek, Erin < formanekek@cdmsmith.com >

Cc: Emilsson, Gunnar < EmilssonGR@cdmsmith.com >; 'cirian.mike@epa.gov' < cirian.mike@epa.gov >; Tom Biksey

<Tom.Biksey@ehs-support.com>; Laura Jensen ljensen@rouxinc.com>

Subject: RE: Columbia Falls Aluminum Company Draft Baseline Human Health Risk Assessment Work Plan

Hi Erin: Thanks for providing the information below and the suggested path forward. Do you have a preliminary sense if the ratio will be similar to, higher or lower than the 6:1? If we won't know the answer until later in the year, we may want to consider collecting a few samples for both hex and tri chromium analysis as part of the ongoing Phase II work to develop our own site-specific ratio. For the purpose of the work plan we could address this as an option as indicated in the highlighted text added to the generic text below. If we decide to analyze select samples for hex and trivalent chromium, we would provide more specifics a Field Modification form for EPA review prior to implementation.

Let me know if that sounds reasonable; as we are about to resubmit the updated draft BHHRA WP for EPA review later this week.

Regards,

Drew

## Andrew Baris, PG (NY)

Principal Hydrogeologist/Executive Vice President

Direct: 631.630.2404 Mobile: 631.921.1805 abaris@rouxinc.com



California | Illinois | Massachusetts | New Jersey | New York | Texas

From: Formanek, Erin [mailto:formanekek@cdmsmith.com]

Sent: Tuesday, April 10, 2018 9:58 AM

To: Tom Biksey < Tom. Biksey@ehs-support.com>

Cc: Andrew Baris <abaris@rouxinc.com>; Emilsson, Gunnar <EmilssonGR@cdmsmith.com>; 'cirian.mike@epa.gov'

<cirian.mike@epa.gov>

Subject: RE: Columbia Falls Aluminum Company Draft Baseline Human Health Risk Assessment Work Plan

Tom.

The reference was for IRIS, but I may seek to provide a revised recommendation. Upon further review for another site I am working on, investigation into the IRIS information revealed that the ratio of 6:1 is based on workplace air, not soil in the natural environment. I am actively working to get revised language and a revised ratio drafted the other site and it would be appropriate to adopt it for CFAC when it is available. Perhaps, for the time being, the workplan could include text that speaks to this in a generic sense (e.g., "consideration of the proportion of trivalent to hexavalent chromium will be taken into account in the risk assessment per recommendation from EPA and/or via analysis of select soil samples for both hexavalent and trivalent chromium") and I can provide the ratio and text in time for the risk assessment. Let me know if you want to discuss this further or if this approach will suffice for now.

Thank you, Erin

From: Tom Biksey < Tom. Biksey@ehs-support.com>

Sent: Monday, April 09, 2018 7:23 AM

To: Formanek, Erin < formanekek@cdmsmith.com >

Cc: Drew Baris (abaris@rouxinc.com) <abaris@rouxinc.com>

Subject: Columbia Falls Aluminum Company Draft Baseline Human Health Risk Assessment Work Plan

Erin,

For comment 33; "Chromium exists in the environment mainly as Cr(III) (ATSDR 2000). However, because the valence state of chromium in soil or water at this Site is not known and data are available only for total chromium, risk calculations should assume the ratio of Cr(III) to Cr(VI) is 6:1 (EPA 2013).".

Please provide the EPA 2013 reference. I found reference to ratio in the IRIS Summary, but could not locate the EPA reference.

Smooth seas and fair winds,

Tom

Tom Biksey, MPH
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Consider it done!

Work Safe. Live Safe. Stay Safe.

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